Representative Species in the Northeast Region

America's fish, wildlife and plants are facing unprecedented threats to their survival. The U.S. Fish and Wildlife Service (Service) must make strategic decisions about what kind of action to take and where for the greatest benefit for species. Making those decisions requires the Service to use the best science available to select the most appropriate conservation actions. It is important that these conservation actions have a measurable effect on species populations.

The Service is responsible for Federal trust species, including: migratory birds, threatened and endangered species, interjurisdictional fish and other species of concern. The Service often places a higher priority on one or more of these trust species because of management need, vulnerability or other factors. Detailed conservation planning and implementation, for all trust species, or even the smaller set of priority trust species, is beyond the budgetary and staff resources available.

With increasing threats and decreasing resources, we need to maximize the effect of conservation actions to result in landscapes that can support these species over time.

Representative Species
In the Northeast Region, we responded to this need by developing and implementing an approach to select representative species. The approach was initiated by the Northeast Region Strategic Habitat Conservation (SHC) team and later more fully developed through the North Atlantic Landscape Conservation Cooperative (LCC), working with partners and a team of researchers at the University of Massachusetts Amherst.

A representative species is one that, because of its habitat use, ecosystem function, or management response, typifies lifecycle or habitat requirements for a larger group of species. Representative species is a planning tool that will help the Northeast Region choose where, how much and what kind of conservation actions are needed to support trust and other fish and wildlife species.

The Initial Approach for Selecting Representative Species
An initial list of representative species for the North Atlantic LCC portion of the Northeast Region, including 87 terrestrial species and 13 aquatics species, was selected through the following process:

1. Compiling a regional list of Federal trust species and Species of Greatest Conservation Need that occurred in a majority of State Wildlife Action Plans in the Northeast Region;

2. Associating those species with the common terrestrial and aquatic classifications for the Northeast. Those classes were developed by Northeast states with NatureServe and the Nature Conservancy;

3. Clustering species and their associated habitats based on habitat use, then identifying the species that best represented the species and habitats in each cluster;

4. Bringing Service staff and partners together in expert workshops in three sub-regions of the North Atlantic LCC to use the results of the clustering process to select an initial set of representative species. About 90 Service staff were involved in the initial approach for selecting representative species.

Next Steps
The representative species list initially selected for the North Atlantic LCC will continue to be tested and refined.

An ongoing opportunity to test and refine this list is through the project Providing Science and Tools in Support of the North Atlantic Landscape Conservation Cooperative: Designing Sustainable Landscapes for Wildlife in the North Atlantic Landscape Conservation Cooperative. As part of this project, a subset of the selected representative species are being modeled in three pilot landscapes: the Kennebec River in Maine, Connecticut River tributary watersheds in

New England cottontail can be used to represent the needs of other species dependent on early succvessional habitat.

James Weliver/USFWS

Massachusetts and adjacent Vermont and New Hampshire and the Nanticoke and Pocomoke tributary watersheds to Chesapeake Bay in Maryland and Delaware.

Three workshops will be held in these watersheds this fall to describe the project capabilities and solicit feedback on how to make landscape design tools, including the representative species component, more useful for conservation managers and decision makers.

The results in these pilot areas will be used to help guide the implementation of this project across the Northeast Region and to inform how the Northeast Region will use representative species to do conservation planning in general.

At the same time, Service and partner experts are currently reviewing and refining the initial set of aquatic representative species selected as well as refining the aquatic habitat classification and maps to make them more useful for conservation planning.

Using Representative Species
Representative species simplify planning by focusing on a smaller number of species that best represent the needs of larger groups of species and their associated habitats across a landscape or region. However, not all species' needs will be readily accommodated by the representative species approach. Species that are particularly rare, that have unique habitat needs, or that experience unique management issues (e.g.,

primary threat is collection for pet trade or over harvest) will likely require individual conservation planning.

In addition to refining the list of representative species for the North Atlantic LCC, the Northeast Region is working to implement the use of representative species for setting programmatic priorities and conservation planning. This includes identifying representative species for other geographic areas in the Great Lakes, Appalachia, and South Atlantic. The Northeast Region conservation science team will use national guidance and experience gained through the initial representative species efforts to help determine the most effective ways to engage Service staff and apply representative species in the Northeast Region.

For more information:

Ken Elowe
Science Applications – Assistant Regional Director
413-253-8372
ken_elowe@fws.gov

U.S. Fish & Wildlife Service
1 800/344 WILD
http://www.fws.gov

July 2012

Piping plover can be used to represent the needs of species dependent on coastal beach habitat.